Top Trends for 2010

Brian Prentice
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The shape of 'the new normal'
– some statements CEOs agree with

- The correction will impact advanced economy consumer spending for several years to come (5.34)
- IT-enabled changes will be a key element in our post-recession strategy (5.13)
- Emerging economies are poised for a multiyear period of rapid growth and a rising standard of living (4.99)
- The next decade will be far more volatile and unpredictable than the last (4.96)
- There will be a major wave of merger-and-acquisition (M&A) activity in 2010/2011 (4.95)
- Many companies and industries will have to redesign their business models (4.90)

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Source: Gartner CEO & Business Executive Survey 2010

In recent months, press editorials have suggested that little has changed in business leaders' view of the world, with Goldman Sachs' 2009 executive bonuses being the prime example of "business as usual." However, we also noticed clear public pronouncements this year from leaders such as Jeffrey Immelt, CEO of GE, and Mike Duke, CEO of Wal-Mart, that there has been a "reset" in the way the economy works and that customers are not going to behave the same way they did before the recession. We asked respondents to rate their agreement or disagreement with some "new normal" model hypotheses, on a seven-point scale. Here are the eight statements that received the highest mean agreement scores from the survey respondents.

This suggests CEOs do not anticipate a return to the way things worked in 2007. IT leaders should expect a long, drawn-out reshaping of their firms and perhaps industry structures, in terms of customer proposition (to meet fundamental changes in customer needs) and the international locations of operations — hunting the globe for pockets of consumer-driven growth and reoptimizing tax efficiencies. Some companies may be at the start of a serial acquisition phase. These changes are running ahead of other anticipated IT demand causal factors such as regulation.

> "In a few hundred years, when the history of our time is written from a long-term perspective, it is likely the most important event historians will see is not technology, but the unprecedented change in the human condition. For the first time, people have choices."
>
> *Peter F. Drucker*
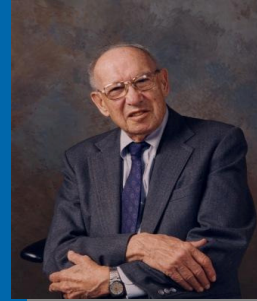
◆ **Things you CANNOT do anything about**

◆ **Things you CAN make choices about**

◆ **Possible strategies for 2010/2011**

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The Global Financial Crisis of 2008 made it abundantly clear how interconnected the world has become. Events in one part of the world, in one industry, rapidly spread across geographies and verticals. There are some trends that are beyond the ability of individual organisations, even seemingly governments, to control.

These trends cannot be avoided, and they cannot be controlled – they must be accepted and accommodated.

 Three such trends are dealt with here, since all will play a pivotal role in the operations and strategic plans of all organisations, in all geographies, in all vertical sectors over the coming few years.

The Economy: Even for those countries which escaped the recession following the GFC in 2008, the impact of the collapse in other parts of the world affects the global availability of capital and credit, the demand for exports and the overall levels of confidence in business and the degree to which institutions are trusted.

The Environment: After years of prevarication as to the reality of the situation, the need to address issues of climate change is now broadly accepted and will increasingly impact all decisions in all geographies. Additional regulation is likely as the concept of a "low carbon economy" gains momentum.

The Proliferation of Connected Devices and Data: We live in a world which is digitally enabled and socially connected. More than 5 billion devices are currently connected to the internet and that number will rise substantially as more interconnected sensor type devices are installed. This has enabled an "always on" digital lifestyle but has also resulted in a growing tsunami of data, numerical, multimedia, structured and unstructured which both informs us and overwhelms us. Dealing with this and the privacy issues it introduces will become increasingly important.

Key Issue: When will a sustained period of business growth return?
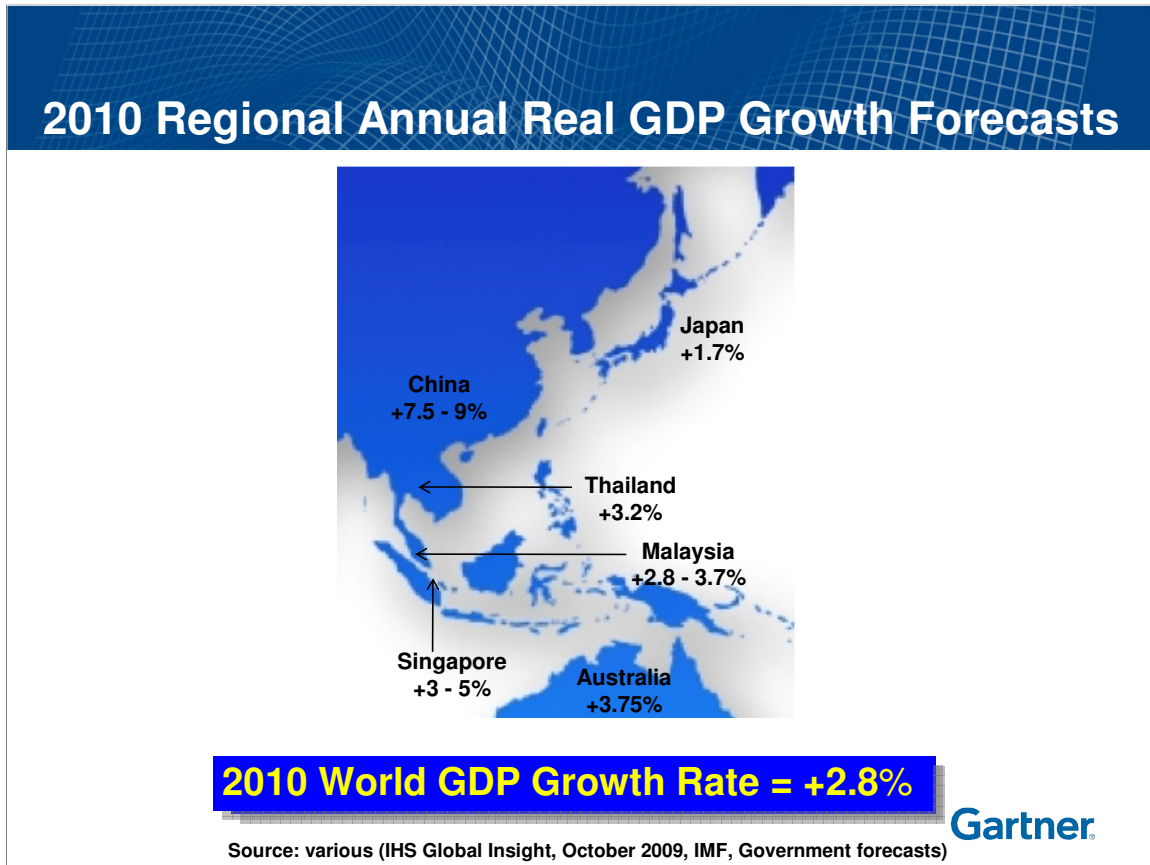
In October 2007, we advised clients to prepare for a recession in 2008. In 2009 we are advising them to prepare a rolling budgetary forecast to help them return to growth. Figures from Global Insight and other ecomic research organisations indicate that 2010 is likely to see a recovery, but that it will be at variable speeds throughout the world. For Europe the recovery will be very slow and inconsistent across different countries. In Asaia Pacific, which escaped the recessionary impacts over the last year powered by the continuing growth in China, growth is expected to accelerate again, although there are strong concerns over the dominant position of China and the extent to which the Chinese economy is built on state investment. North America will return to growth but will not match the strength of emerging markets like Latin America (especially Brazil) and the Middle East.

Recovery will vary in different sectors even within a geography as staples (food and other essentials) maintain their position whilst luxury items and optional purchases remain weak. Of greatest concern is the continuing credit crunch which impacts small and medium enterprises, the lack of confidence of individuals who feel let down by the institutions they believed they could trust (especially financial services but also the automobile sector and government generally) and the impact of confidence on the willingness of consumers to resume spending when unemployment continues to rise, already passing the highest levels for many years in both Europe and North America.

Steve Prentice
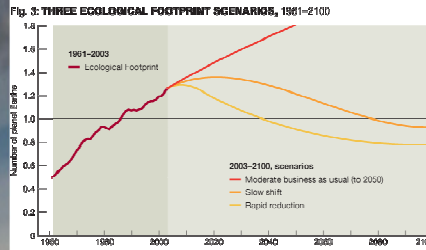December 2009
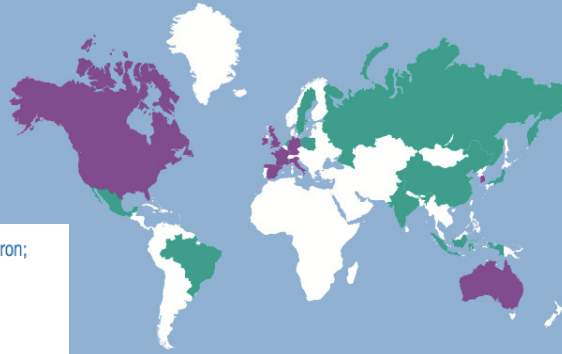
Edelman, the global PR company have been recording levels of Trust in business and governments around the world for many years. The Global Financial Crisis triggered a dramatic drop in trust levels in the US, to their lowest levels ever and on par with Europe (where trust has always remained at around the 40% mark or below). There are differences between industries (tech sector fares well, financial services and auto poorly) and countries vary. Across Asia Pacific the decline is much smaller, just a few percentage points, but 6 out of 10 people reported that they trusted business less than a year ago. Trust in Governments is also down significantly in North America and Europe, but has fallen only slightly in Asia Pacific, except in China, where more than 7 out of 10 trust their government to do the right thing, a big increase over last year.

Trust has a global impact, even for economies not badly hit by the financial crisis since it impacts consumer confidence, spending, credit availability elsewhere in the world, depressing exports and trade. At a personal level, levels of trust drive buying decisions, preferences and levels of recommendation. *"Organisations must be forthright and honest in their actions and communications. In a time of utter distrust, business leaders must make the case for actions and then demonstrate their progress against these goals. When problems arise, stakeholders need to see senior executives take a visible lead in acknowledging errors, correcting mistakes, and working with employees to avoid similar problems going forward. This adherence to transparency is at the core of each of the four pillars of Public Engagement."*

For more information see http://www.edelman.com

Climate change, peak oil, energy independence, the challenges of meeting escalating demands for energy, and in the future a similar issue for resources in general, are for varying reasons, beginning to change the way society thinks about the environment and sustainable development. The outcome of those changes are by no means certain or even predictable But we can be sure there will be change that will affect enterprises requiring a range of responses from the tactical to the strategic. The 50% increase in population by 2050 according to the UN is going to accelerate the environmental challenges, put much greater emphasis on sustainability, and increase the competition for resources. Climate change has been the key catalyst for the current interest in environmental issues, including sustainable development. As long as the current science surrounding climate change remains credible, enterprises should anticipate that the current focus on energy, water and greenhouse gas (GHG) emissions will continue, and draw attention to other environmental issues such as resource depletion, species extinction, bio-diversity and environmental justice. The language of ecology and business will increasingly overlap in many areas as environmental externalities such as carbon get a real cost associated with them, and as stakeholder awareness increases seems likely. So the environment becomes a matter of good old-fashioned efficiency as well as basic reputational risk management. But there will remain many hard trade-offs between enterprise financial and operational performance and that of its environmental performance. Enterprises need to get better at identifying and managing the changing risks, and smarter at environmental decision making, not least because they will be under greater pressure to be transparent. Information systems will be critical in the role — from governance, risk and compliance, through corporate social responsibility (CSR) systems, to enabling new and more-sustainable business models.

Steve Prentice
December 2009

Proliferation – Devices and Data
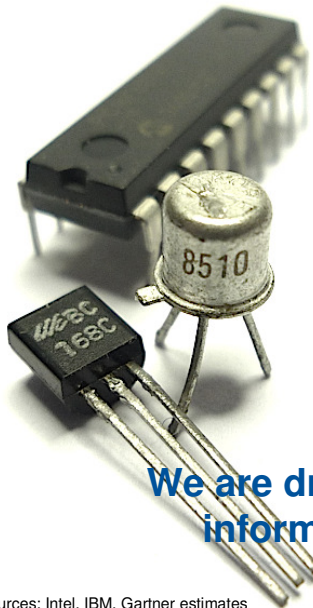
◆ There are 1 billion transistors for every human on the planet, TODAY!

◆ By 2011 more than 30 Billion RFID tags will be embedded into products

◆ By 2015 more than 15 Billion devices will be connected to the Internet

◆ Every day more than 15 Petabytes** of new information is being generated, and the rate doubles every 18 months
(** equivalent to 300 million four drawer filing cabinets)

We are drowning in a sea of data, but we lack information, insight and understanding

Gartner

Sources: Intel, IBM, Gartner estimates

We live in world which is increasingly instrumented and interconnected. The number of "smart" devices is growing everyday and the volume of data they produce is growing exponentially – doubling every 18 months. The volume of data is growing exponentially and is expected to increase by 300 times by 2020 (or 20 times if video traffic is excluded).

By 2012 we will have 5 times more data stored than we did in 2008. We now have access to more data than at any time in human history. We are in danger of drowning in a tidal wave of data, but we are lacking information, insight and understanding.

The challenge for business is to make sense of all this data, to hear the music amidst the noise, to identify the valuable from the trivial, the critical from the unimportant, and to do it all quickly enough to be able to make use of that discovery – to make better decisions. To capitalise on our knowledge to become more intelligent and work smarter.

Every day 15 petabytes of new information is being generated (8x more than the information stored in all US libraries). A petabyte is one million gigabytes or about the equivalent of 20 million four drawer filing cabinets filled with text.

By 2015 there will be more than 15 billion devices connected to the internet (source: Intel). By 2010 30 billion RFID tags will be embedded into products (passports, buildings, animals) adding to the volume of data (source:IBM)

"Technology succeeds when it meets a need that people care about!"

Genevieve Bell, Intel Research Fellow

◆ **Things you CANNOT do anything about**

◆ **Things you CAN make choices about**

◆ **Possible strategies for 2010/2011**

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The economy across the many regions is changing, moving from an industrial economy to a new "knowledge economy" where a growing proportion (30-45% depending on the member state in the EU for example) of jobs are "knowledge jobs". The current ICT infrastructure underpins the knowledge economy and investments in better use of ICT have been shown to be an effective stimulus to economic growth. The potential benefits are huge. The direct economic contribution from ICT across the EU was estimated to have been €670 billion in 2007 and to have accounted for half of the EU's productivity growth between 2001 and 2004. (see the i2010 EU Policy Framework for the information society and media – http://ec.europa.eu/i2010).

New technologies are emerging all the time and as they mature enterprises look to deploy to seek competitive advantage or resolve existing problems. Whilst organisations could ignore the advance of technology to do so would leave them in a progressively deteriorating competitive position in the marketplace. The role of technology is now pervasive, impacting virtually every business and individual on the planet either directly or indirectly. As we pass through the fourth era of ICT (automation of business processes; augmenting personal productivity; e-commerce; externalising the enterprise) business leaders and organisations can determine where, how and when to deploy technology for maximum return – we do have choices, even if the choice of doing nothing is not really a viable option!
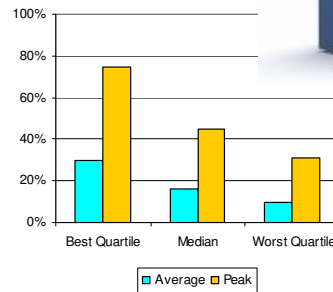

Relentless Progress....

....of predictable evolution.
Ride the cost, efficiency, power curves for:

✔ Virtualisation

✔ Storage

✔ Bandwidth

✔ Servers

✔ etc.

Midrange Server Utilization

But ONLY where it does not result in disruptive change

Gartner

Moore's Law continues unabated, even after more than 40 years, and whilst the focus have moved from increasing the power on a single chip to other areas, the impact on the cost/performance of IT equipment remains. Storage, processing power, bandwidth all continue to fall in price. Take advantage of these incremental improvements to gain efficiency, reduce power consumption and "green" your data center – both to save money and to accommodate the growing requirements.

However, some changes are essentially discontinuous (the consumerisation of IT for example) and must be treated differently – they involve social and procedural changes which will be far more impactful than the simple cost savings and capability enhancements of other predictable advancement.

It is not unusual for retailers to contact the social network in the hopes of increasing sales. What is interesting is the measurable increase in the level of engagement with the social network. It is common to find community sites that offer tips and tricks that will further the use of the retailers products as well as to allow members to interact with each other. It may be to post a question or share information.

Cisco is one of the technology vendors that had a specific purpose for creating its community: it wanted to ensure a steady stream of networking engineers and architects that were well trained and equipped to perform their jobs. It set a goal to create a social learning site with community features and have it operational within six months. For more information on the Cisco Learning Network, refer to Gartner report "Case Study: Cisco Creates a Social Learning Community" ID Number G00168028.

Action item: Let go of complete control. Community managers need to get comfortable relying on the community to "police" itself and react reasonably to negative information posted by site users.

Trend #1: Social Computing = Device Proliferation

◆ Consumerisation of IT, SSD/Flash

◆ Form Factors (Surface, tablets, mobile)

◆ Entertainment, "always on"

◆ Future of the PC/HCI

◆ Expectations of Participation

◆ Behavioural changes in society

You must look towards social and behavioural sciences to better understand the impacts and predict future changes

By 2013 mobile phones will overtake PCs as the most common web access device worldwide

Gartner

Trend #2: Contextual Computing

◆ Who you are, Where you are, What you are doing

◆ What you want next

◆ Location is the key to context, time the trigger

By 2012:

◆ More than 7.3 billion networked devices worldwide

◆ 298 million subscribers of location-based services

By 2014, over 3 billion adults will be able to transact electronically via mobile or internet technology.

By 2015 context will be as influential to mobile services as search is to the web

MVE algorithm plot on citywide activity
Source: Sense Networks

Gartner

Emerging context-enriched services will use location, presence, social attributes, and other environmental information to anticipate an end-user's immediate needs, offering more-sophisticated, situation-aware and usable functions.

By 2012, the interconnections between mobile, social, Web and communications offerings will mean that mass market opportunities for context-aware computing will emerge. More than 7 billion networked devices and more than 1.2 billion smartphones will drive this potential value of the network. More than $150 billion of global telecom spending will shift from services to applications by then, and the global potential market for context-aware services will amount to $215 billion. This will reshape the telecommunications industry as service providers transition their business models to these new services, while at the same time they move away from traditional siloed voice services. Unlocking this potential will be one of the next major challenges for IT. One example of technologies' impact here is that Gartner expects 75% of new search installations to include a social search element. Such advances will allow for systems that synthesize useful knowledge rather than create noise.

These offerings will utilize advanced inference engines, such as Bayesian-based Minimum Volume Embedding algorithms to simplify the data structures — and storage requirements for creating maps and processes that predict user behavior rather than react to it. For end users, the effect will be an even-greater awareness of the various system knowledge and management of their profile — the "digital me" — a part of which will be based on information gained through various sources.

Action Item: In 2010, place increasing scrutiny on context-aware computing and its impact to your specific industries and work processes — think about embedding context awareness in user interfaces, objects and place-oriented services.

Linking the Real and Digital Worlds
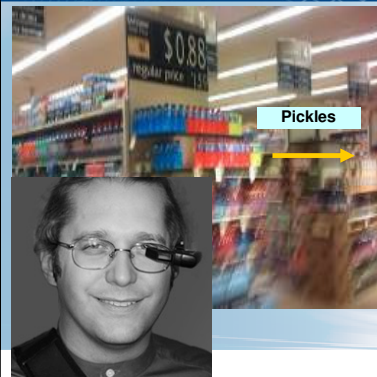
- Wearable or "glanceable" interface
- Context-based information at point of decision/action
- Contextual information includes location, orientation, time, proximity to other people or objects, history, emotional state
- Digital "personae" – Who is the REAL you?

By 2015 Internet marketing will be regulated, covering more than $250 billion in internet marketing spend

Source: Sensor Wireless

Which emerging and embryonic technologies should early adopters be examining for competitive advantage?

Augmented reality enables the user's view of the real world to be supplemented with relevant information, such as context-specific text or graphics delivered to a heads-up display or mobile device, or audio information delivered to a headset. Early adoption is within consumer location-based services, maintenance and repair applications, and medicine (where models of internal organs and results from scans can be overlaid on a patient).

Increasingly, real-world objects will not only contain local processing capabilities due to the falling size and cost of microprocessors, but they will also be capable of interacting with their surroundings through sensing and networking capabilities. The emergence of this Real World Web will bring the power of the Web, which today is perceived as a "separate" virtual place, to the user's point of need of information or transaction. These objects will need to provide (secure) access to their information so that it can be synthesized into a set of context-enriched services.

Organizations will be capable of taking advantage of ongoing connectivity — for example, delivering product safety or recall alerts or additional services — even after products have been provided to customers. They will also capitalize on the potential for new process models, such as automatically determining compliance with transportation regulations or mirroring the experience of an item as it goes through the supply chain (as in the

China: Nike's Running Campaign

- **Objectives:**
  - **Increase Brand Awareness**
  - **Promote "Zoom" Product Line**

ZOOM 狂足快跑 开启蓝牙 赢取NIKE ZOOM 运动鞋 快讯

活动细则

- **How:**
  - Run from the billboard ads to the nearest retail store.
  - The fastest runner of the day wins a free pair of shoes.
  - Bluetooth used to send instructions and to time the run.

- **Results:**
  - 250K Bluetooth messages sent, 15K runners, 7.8K completed the run.

Key Issue: Will mobility be successful in creating consumer-driven services?

In August 2008, Nike conducted a Bluetooth campaign in Beijing, Shanghai and Guangzhou, China, to promote its Zoom product line. The billboard display ads informed people of the campaign, and that interested parties could obtain campaign details and maps from the Bluetooth module installed on the billboard. They also could time the running using Bluetooth modules on the billboard and at the retail store.

This campaign was designed and implemented by Madhouse, a mobile advertising company based in China. The campaign used Bluetooth, a technology that's pervasively used in many mobile marketing campaigns, to notify people of nearby promotions. The advantages of Bluetooth are that it's free to use and can reach people within a certain range. The downside is that it only works when the Bluetooth is turned on, and messages usually are sent without people's admission, so they're likely to fall into the spam category. Also, advertisers can't track the responses. In this campaign, advertisers first asked for user permission whenever they wanted to obtain further information. Thus, they could avoid the spam issue. Second, advertisers interact with people by encouraging them to take part in the competition. Thus, Nike can track the effectiveness of the campaign. In fact, many people run multiple times to win the competition; this not only increases brand awareness, but also people had fun with running.

Bluetooth campaigns are designed to reach a relatively small audience within a certain location. This is in contrast to cellular technologies, such as SMS or WAP, which are intended for a larger audience. Due to the small scale of the Bluetooth campaign, it's more targeted and the launch costs are lower.

Bottom Line: Interactivity can encourage participation of end users, and integrating the mobile channel with other media — in this case, billboard ads — can increase the effectiveness of the campaign.

We live in world which is increasingly instrumented and interconnected. The number of "smart" devices is growing everyday and the volume of data they produce is growing exponentially – doubling every 18 months. By 2012 we will have 5 times more data stored than we did in 2008. We now have access to more data than at any time in human history. We are in danger of drowning in a tidal wave of data, but we are lacking information, insight and understanding. The challenge for business is to make sense of all this data, to hear the music amidst the noise, to identify the valuable from the trivial, the critical from the unimportant, and to do it all quickly enough to be able to make use of that discovery – to make better decisions.

Analytics lets us understand what has happened in the past to provide a baseline for the future. It gives us **hindsight**.

As we improve our analytics we increase our understanding of not only what happened, but why and how. That delivers **insight**.

Analytics gives us the understanding to model and simulate the impact of changes on our world, allowing us to better predict what might happen in the future. It gives us **foresight**.

Real time monitoring and stream and event processing lets us understand what is happening right now and react in time to deliver **line-of-sight** from cause to effect.

Better information enables better decisions. We can all be smart with hindsight, the challenge is to develop the foresight and line-of-sight to make smarter decisions about what is happening now and what is about to happen. Better analytics, faster analytics, more powerful analytics is about developing better foresight.

Foresight will help to reduce the bad decisions. Foresight helps us see what is coming. Foresight helps us prepare for what is about to happen. Foresight helps us to be more effective, and more efficient. Foresight will help to cut down on waste. Foresight helps us to see what could be, rather than what has been. Foresight is all about the future, not about the past.

Analytics helps us see more clearly. See what needs to be done, and by when. See what is needed, and where. See what is being wasted, and why. See what could be achieved, and how. Better analytics helps to simplify decision making – make the complex simple, the obscure clear, the unexpected predictable.
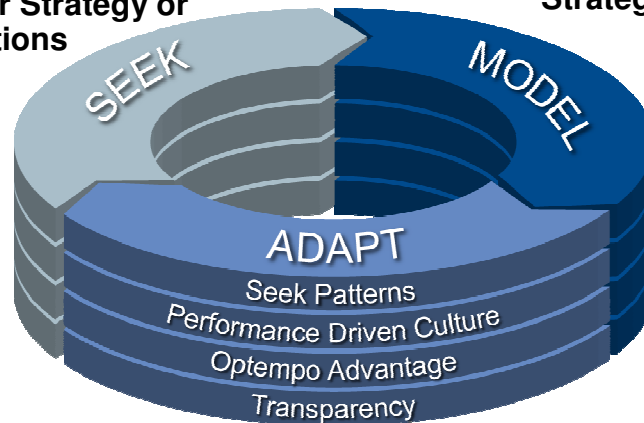
When faced with overwhelming volumes of information you can no longer dwell on each individual data point, you have to spot the patterns and the outliers, the anomalies and exceptions for these are the signals, sometimes very weak against the cacophony of background data noise, that indicate that change is coming, that a decision has to be made. As information was to data, so patterns are to information. Patterns represent a higher level abstraction of inter-related critical information from multiple sources, highlighting clear actionable information from the background noise. Whilst the information may come from many different sources, business analytics is the critical element in identifying the meaning, isolating the anomalies and exposing the patterns.

Successful businesses will be those that not only seek out the early signals of change, but also understand the implications of those patterns and then act quickly enough to realise the value through business activities. In short they can seek, model and adapt to the early indicators of change. Gartner describes this as a Pattern-Based Strategy. The ability to make timely decisions based on the patterns observed is critical to success. It is not enough to identify the early indicators of change, nor to understand their impact and significance if that knowledge is not translated into actions which deliver positive business outcomes. It is the ongoing ability to adapt to a continually changing business environment and optimising the business outcomes that delivers success.

Gartner's research on Pattern-Based Strategy explores the disciplines and technologies that enable business leaders to pro-actively seek, model and adapt to patterns of change.

Pattern Seeking is a discipline to seek and exploit signals that may lead to a pattern that will have a positive or negative impact on strategy or operations

Performance-Driven Culture is a discipline that extends the traditional performance focus to leading indicators, modeling the impact of patterns, and driving desired behaviors (as a result of a new pattern) across the organization.

Transparency is a discipline that enables awareness and visibility to facts that are critical to the achievement of the desired outcomes of an organization.

Optempo Advantage is a discipline for improving an organization's competitive rhythm so that it can consistently and dynamically match pace to purpose.

Strategic Guideline: The cloud computing market will expand from proprietary megaproviders (today), to ecosystems and supply chains of providers, to thousands of smaller providers that rely on agility and standards for interoperability to compete.
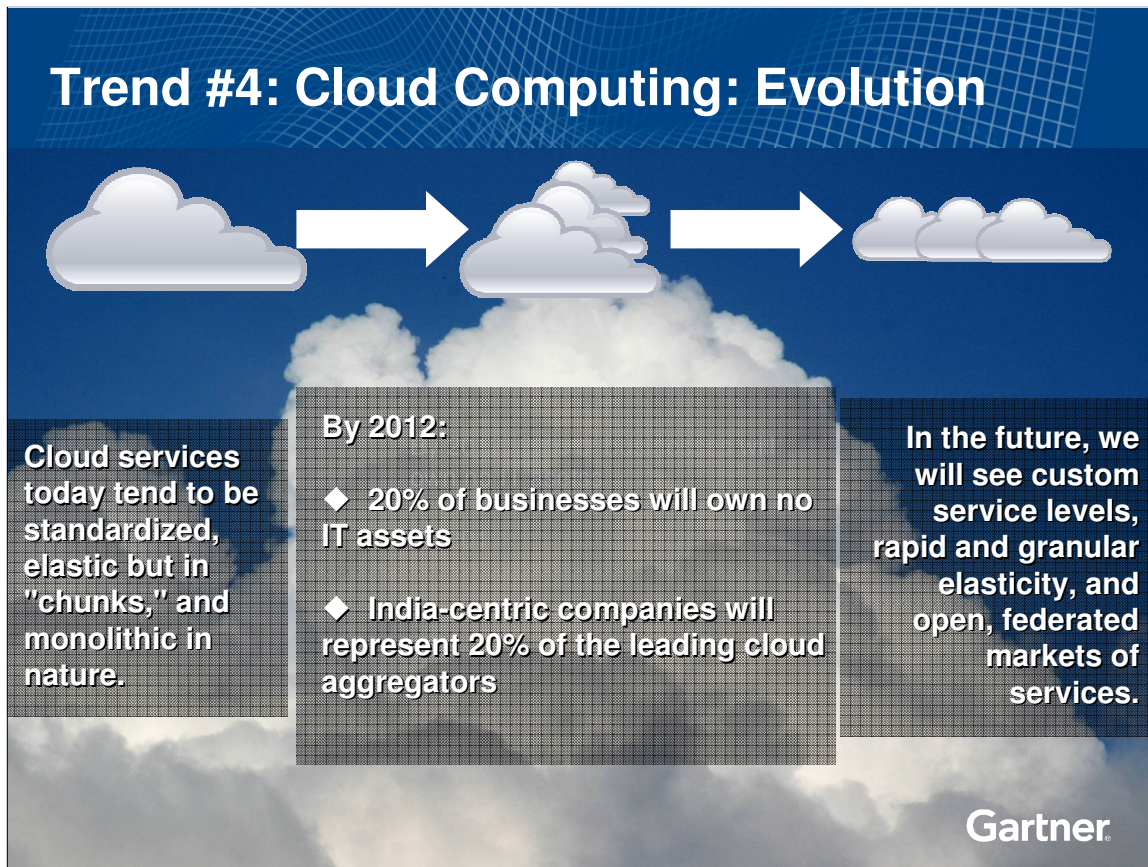
The cloud computing service market is embryonic, and the future market will look nothing like the market of 2009. In many ways, it mirrors the evolution of the server market — starting with vertically integrated, proprietary mega-solutions, growing into ecosystems of partners and supply chains, and then opening up to more competition at every layer. At a high level, there are three phases:

Phase 1: Monolithic (Early). Early cloud computing services will be based on proprietary/internal architectures — islands of cloud services delivered by megaproviders. This is what Google, salesforce.com and Microsoft look like today.

Phase 2: Vertical Supply Chain (2 or More Years). Over time, some cloud providers will leverage cloud services from other providers (for example, ISVs moving into SaaS on top of Microsoft's Azure Services Platform, use of Force.com and use of Google App Engine). Still proprietary islands, but ecosystems starting to build.

Phase 3: Horizontal Federation (4 or More Years). Smaller providers will federate horizontally to gain economies of scale (and efficient use of assets) — also, enterprises will leverage horizontal federation for peak capacity (overdraft protection, cloudbursting). There will be more choices at each layer of cloud computing, and standards will gain momentum. Monolithic providers will not go away, but they will be surrounded by more agile, focused competitors who rely on standards for interoperability.

> **"We are entering the period of the open-source brand, where in order for people to feel it is relevant to them, they have to have a part in creating it."**
>
> *Mark Kingdon, former CEO of Ad agency Organic*

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Business Leaders Know We Are Entering a New Era, With New Rules and New Opportunities

"We are not going back. I believe the economic crisis has brought a fundamental shift in consumer attitudes and behavior. There is a 'new normal,' in which people want to save money and are getting smarter about saving money."

Mike Duke, CEO of Walmart Corporate speech, press release quote, June 2009

"Consumers want products that are networked, multi-functional and service-enhanced, …. and user experiences that are rich, shared and, increasingly, green."

Howard Stringer, Chairman, CEO & President, Sony

"Business must make fundamental changes if it is to regain the license to operate"

Richard Edelman, President & CEO Edelman

Both publicly (as shown here) and privately in our work with executives, Gartner is seeing leaders gradually switch their focus toward growth and renewal strategies. Once they pass the "triage" phase of coping with the effects of the sudden late 2008 economic crisis, they face a business "doldrums" period, which provides a great opportunity for strategic thinking and macrolevel actions on the business.
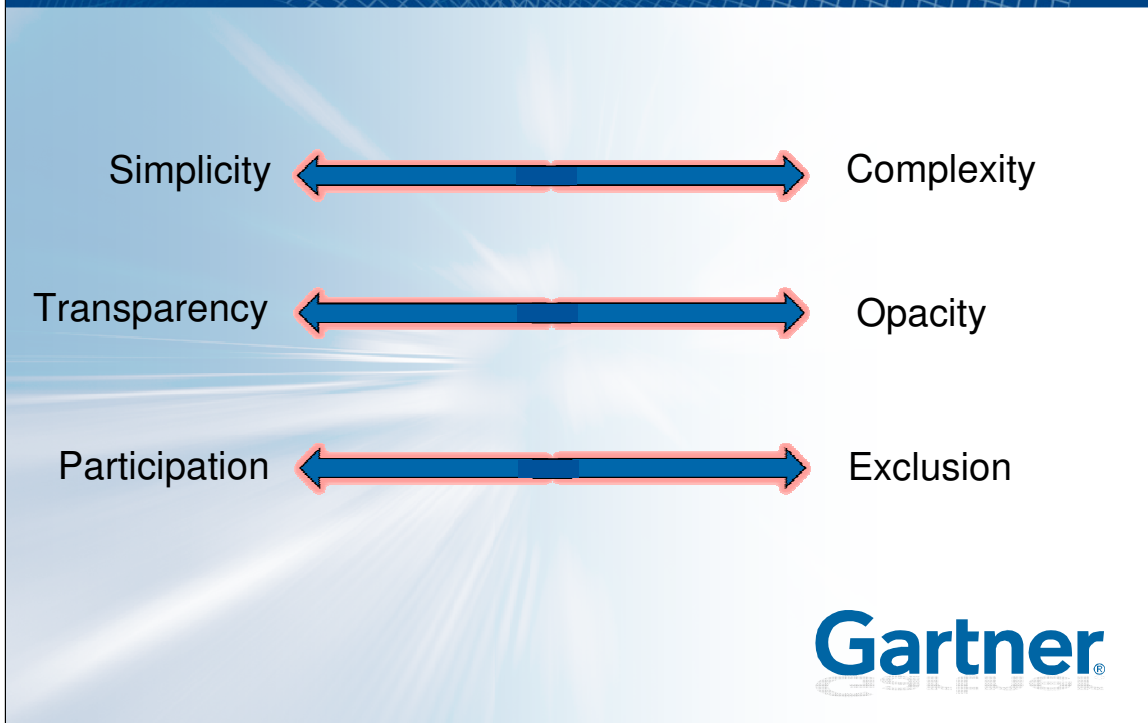
In the aftermath of the global financial crisis many individuals feel betrayed by the institutions they once trusted. They increasingly see the values that they hold apparently ignored by large enterprises and business leaders. As the impact of the downturn continues to hurt individuals, in whatever geography, a new search for value, fairness and equality is underway. However, there is a fundamental issue at stake here, since the values of individuals are also driven by their personal circumstances so that whilst they may espouse the benefits of fairness, personal greed will also play a major part for many. The three decision spectrums shown here are almost philosophical decisions for business leaders, reflecting many of the values of consumer markets, socialist political systems and collective reasonableness. For business however, opacity, complexity and private decision-making represents a time-hounoured approach to creating profit and market differentiation. It remains to be seen to what extent the market has really moved, and for how long. At the start of 2010 however, CEOs should consider carefully the mood of the markets they are in and determine the extent to which they feel the need to reposition along these spectrums.
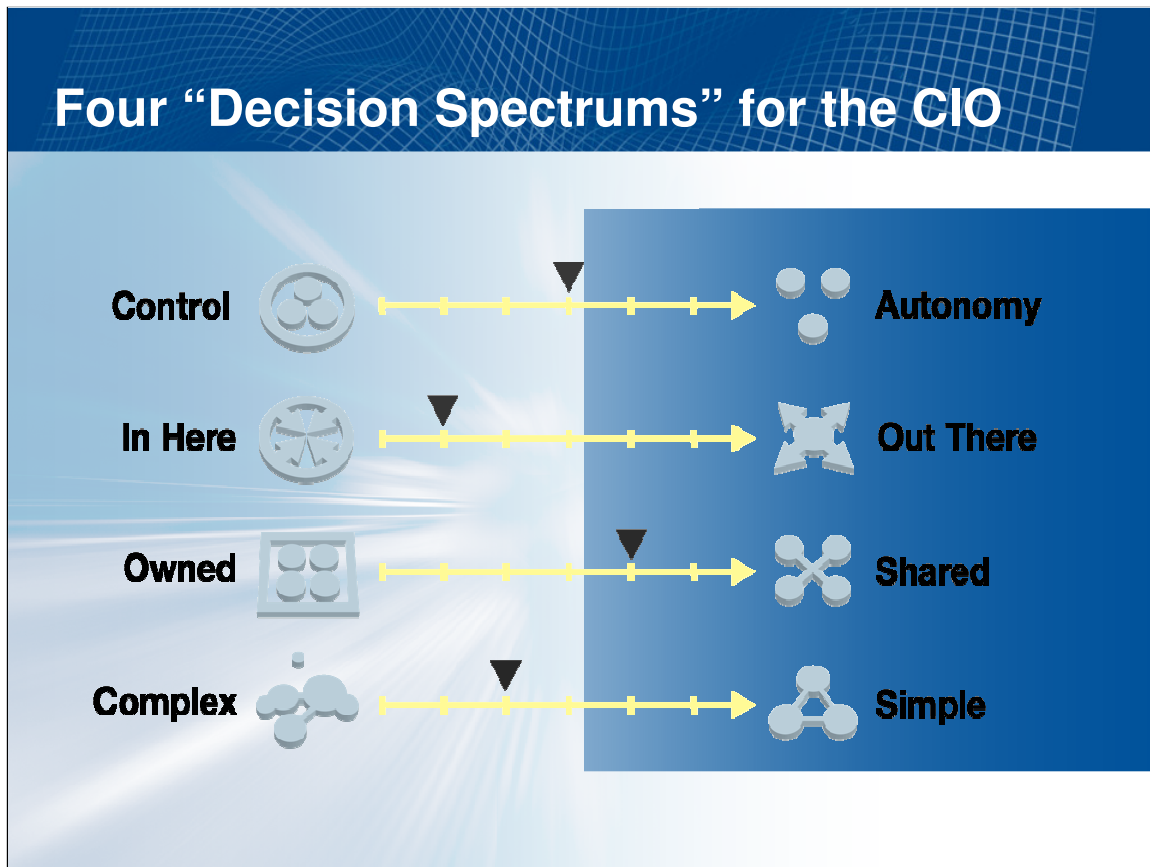
We believe that enterprise IT strategy in 2010 and beyond will be driven Going forward the IT industry and IT organizations will be driven by four major decisions – we call them decision spectrums since organizations are at different positions. The usage and importance of IT, development of new technologies or services and the impact of IT on business will be determined by movements on these spectrums:

◆ Control vs. Autonomy – this is about processes and responsibilities under control versus within the sphere of influence

◆ In here vs. Out there - IT focused on internal process optimization versus detection and reaction to weak signals and patterns externally

◆ Owned vs. Shared - Owning all processes and IT infrastructure versus focus only what is competitive, cost effective and risk profile supportive.

◆ Complex vs. Simple – the complexity of the enterprise IT architectures versus the simplicity of Facebook or iPods.

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